



Patent  
Attorney's Docket No. 034279-005

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of	)	<b>MAIL STOP RCE</b>
Philip Russell et al.	)	
Application No.: 09/937,715	)	Group Art Unit: 2874
Filed: January 16, 2002	)	Examiner: Sarah U. Song
For: A PHOTONIC CRYSTAL FIBRE AND A	)	Confirmation No.: 7024
METHOD OF ITS PRODUCTION	)	
	)	
	)	
	)	

**REQUEST TO ASSOCIATE APPLICATION WITH CUSTOMER NUMBER**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Please associate this application with Customer Number 21839. See the Declaration and Power of Attorney form submitted concurrently herewith.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date: March 8, 2005

By:   
William C. Rowland  
Registration No. 30,888

P.O. Box 1404  
Alexandria, Virginia 22313-1404  
(703) 836-6620



Attorney Docket No. 034279-005

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of	)	
Philip St. John RUSSELL et al	)	Group Art Unit: 2874
Application No.: 09/937,715	)	Examiner: Sarah U. Song
Filed: January 16, 2002	)	Confirmation No. 7024
For A PHOTONIC CRYSTAL FIBRE AND A	)	
METHOD OF ITS PRODUCTION	)	
	)	
	)	

**REVOCATION AND NEW POWER OF ATTORNEY BY ASSIGNEE OF ENTIRE INTEREST**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

As the Assignee of the entire interest in the above-identified application, all powers of attorney previously given are hereby revoked, and I hereby appoint the attorneys and agents associated with the following PTO Customer Number of Burns, Doane, Swecker & Mathis, L.L.P. to prosecute said application and to transact all business in the Patent and Trademark Office connected therewith and to file, prosecute and transact all business in connection with the above-identified application

Customer Number **2 1 8 3 9**

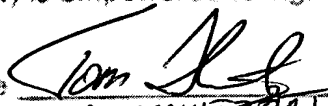
The Assignee has reviewed documentary evidence of the chain of title from the original owner to the Assignee, copies of which are attached hereto

Please direct all telephone calls and correspondence to


Burns, Doane, Swecker & Mathis, L.L.P.  
P.O. Box 1404  
Alexandria, Virginia 22313-1404  
(703) 836-6620

The undersigned (whose title is supplied below) is empowered to sign this statement on behalf of the assignee.

Date 2/2 - 2005

Signature   
Name TOM KNUTZEN  
Title CHAIRMAN

Company NKT Research & Innovation A/S

SIGNATURE   
NAME THOMAS HOFMAN-BANG  
TITLE BOARD MEMBER

### ASSIGNMENT

WHEREAS, QINETIQ LIMITED, a corporation organized and existing under and by virtue of the laws of England and Wales, and having an office and place of business at 85 Buckingham Gate, London SW1E 6PD, United Kingdom, (hereinafter "Assignor") is the owner of the entire right title and interest, legal and equitable, in and to:

US Patent No. 6,301,420 filed on 1 May 1998 and entitled 'Multicore Optical Fibre';  
US Patent No. 6,334,019 filed on 17 June 1998 and entitled 'Single Mode Optical Fibre';  
US Patent No. 6,603,912 filed on 31 October 2001 and entitled 'Single Mode Optical Fibre Having a Large Core Photonic Crystal'; and  
US Patent Application No. 09/937,715 filed on 16 January 2002 and entitled 'A Photonic Crystal Fibre and a Method for its Production';

AND WHEREAS, NKT Research & Innovation A/S, a corporation organized and existing under and by virtue of the laws of Denmark, having a place of business at Blokken 84, DK-3460 Birkerød, Denmark, (hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in and to the patents/patent application listed above;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, Assignor has sold, assigned, and transferred, and by these presents does sell, assign and transfer unto the Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements in the Portfolio, and in and to the Letters Patents, applications, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and Assignor does hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the inventions and improvements to the Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the Assignee, its successors and assigns.

AND, for the consideration identified above, Assignor does agree that Assignor and Assignor's executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to the Assignee, its successors and representatives all facts known to Assignor relating to the improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in the Assignee, its successors

US - Patent Application


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or assigns the entire right, title and interest in and to the improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore Assignor covenants and agrees with the Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by Assignor and that full right to convey the same as herein expressed is possessed by Assignor.


#### SIGNATURE OF ASSIGNOR

IN TESTIMONY WHEREOF, THE UNDERSIGNED has hereunto set his hand on the date indicated below.

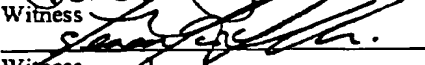
  
NAME Anthony O Bowdery  
TITLE Director/Intellectual Property

13 JANUARY 2005  
Date

Qinetiq Limited  
85 Buckingham Gate  
London SW1E 6PD, United Kingdom

  
Witness


13 January 2005.  
Date

  
Witness

13 January 2005  
Date

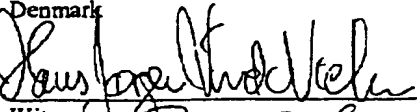
#### SIGNATURE OF ASSIGNEE

IN TESTIMONY WHEREOF, THE UNDERSIGNED has hereunto set his hand on the date indicated below.

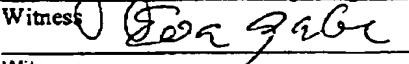
  
NAME Søren Isaksen  
TITLE CEO

Jan 20, 2005  
Date

NKT Research & Innovation A/S  
Blokken 84  
DK-3460 Birkerød  
Denmark

  
Witness

Jan. 20, 2005  
Date

  
Witness

Jan. 20, 2005  
Date

US - Patent Application

22

16-JAN-2002 09:57 FROM INTELLECTUAL PROPERTY

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P.10

IPD/P2828/USW

## ASSIGNMENT OF PATENT APPLICATION

(Inventors) ( Phillip St. John Russell  
( Timothy Adam Blrks  
( Jonathan Cave Knight  
( Brian Joseph Mangan  
(  
(  
In consideration of one pound sterling, the receipt and sufficiency of which consideration hereby acknowledged the undersigned agree(s) to assign, and hereby does assign, transfer and set over to

(Assignee) ( QINETIQ LIMITED  
(Address) (of QINETIQ LIMITED, Cody Technology Park, Ively Road, Farnborough, Hants. GU14 0LX, United Kingdom  
(hereinafter designated as the Assignee) the undersigned's entire right, title and interest for the United States, its territories, dependencies and possessions, and for the country of

(Other Countries) ( in the invention, and all application for patent and any Letters Patent which may be granted therefore, known as  
(Title) **A Photonic Crystal Fibre and a Method for its Production**(Case No. P2828/USW ) for which the undersigned has (have) executed on even date herewith an application for patent in the United States of America or, if not on even date, then has executed (on \_\_\_\_\_ or has already filed in \_\_\_\_\_  
(U.S. appin. Serial No. 09/937715, filed on Oct 1, 2001  
(The undersigned acknowledges an obligation of assignment of this invention to said assignee at the time the invention was made.

The undersigned agree(s) to execute all papers and documents necessary in connection with the application or any interference which may be declared and any continuing or divisional applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient and further to perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the firm of NIXON & VANDERHYE P.C. the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document.

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P.11

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned signature(s).

Signature of Inventor



P J RUSSELL

Date

19 DEC 2001

Witnessed by



Date

19/12/01

Signature of Inventor

T A BIRKS

Date

Witnessed by

Date

Signature of Inventor

J C KNIGHT

Date

Witnessed by

Date

Signature of Inventor

B J MANGAN

Date

Witnessed by

Date

Signature of Inventor

Date

Witnessed by

Date

Signature of Inventor

Date

Witnessed by

Date

16-JAN-2002 09:58

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P.16

IPD/P2828/USW

# ASSIGNMENT OF PATENT APPLICATION

(Inventors) ( Philip St. John Russell  
( Timothy Adam Birks  
( Jonathan Cave Knight  
( Brian Joseph Mangan  
(  
(  
( In consideration of one pound sterling, the receipt and sufficiency of which consideration hereby acknowledged the undersigned agree(s) to assign, and hereby does assign, transfer and set over to  
( Assignee) ( QINETIQ LIMITED  
( Address) (of QINETIQ LIMITED, Cody Technology Park, Ively Road, Farnborough, Hants. GU14 0LX, United Kingdom  
(hereinafter designated as the Assignee) the undersigned's entire right, title and interest for the United States, its territories, dependencies and possessions, and for the country of  
( Other Countries) ( in the invention, and all application for patent and any Letters Patent which may be granted therefore, known as  
( Title) A Photonic Crystal Fibre and a Method for its Production (Case No. P2828/USW ) for which the undersigned has (have) executed on even date herewith an application for patent in the United States of America or, if not on even date, then has executed (on \_\_\_\_\_ or has already filed in \_\_\_\_\_  
(U.S. appln. Serial No. 09/193,715, filed on Oct 1, 2001  
(The undersigned acknowledges an obligation of assignment of this invention to said assignee at the time the invention was made.

The undersigned agree(s) to execute all papers and documents necessary in connection with the application or any interference which may be declared and any continuing or divisional applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient and further to perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

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P.17

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned signature(s).

Signature of Inventor

P J RUSSELL

Date

Witnessed by

Date

Signature of Inventor

T A BIRKS

Date

17 Dec 2001

Witnessed by

Date

17 December 2001

Signature of Inventor

J C KNIGHT

Date

Witnessed by

Date

Signature of Inventor

B J MANGAN

Date

Witnessed by

Date

Signature of Inventor

Date

Witnessed by

Date

Signature of Inventor

Date

Witnessed by

Date



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IPD/P2828/USW

# ASSIGNMENT OF PATENT APPLICATION

(Inventors) ( Philip St. John Russell  
( Timothy Adam Birks  
( Jonathan Cave Knight  
( Brian Joseph Mangan  
(  
(  
In consideration of one pound sterling, the receipt and sufficiency of which consideration hereby acknowledged the undersigned agree(s) to assign, and hereby does assign, transfer and set over to

(Assignee) ( QINETIQ LIMITED  
(Address) (of QINETIQ LIMITED, Cody Technology Park, Ively Road, Farnborough, Hants.  
GU14 0LX, United Kingdom  
(hereinafter designated as the Assignee) the undersigned's entire right, title and interest for the United States, its territories, dependancies and possessions, and for the country of

(Other Countries) ( in the invention, and all application for patent and any Letters  
(Title) Patent which may be granted therefore, known as  
A Photonic Crystal Fibre and a Method for its Production (Case No. P2828/USW )  
for which the undersigned has (have) executed on even date herewith an application for patent in the United States of America or, if not on even date, then has executed (on \_\_\_\_\_ or has already filed in \_\_\_\_\_  
(U.S. appln. Serial No. 09/937,715, filed on October 1, 2001  
(The undersigned acknowledges an obligation of assignment of this invention to said assignee at the time the invention was made.

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P.13

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned signature(s).

Signature of Inventor

P J RUSSELL

Date

Witnessed by

Date

Signature of Inventor

T A BIRKS

Date

Witnessed by

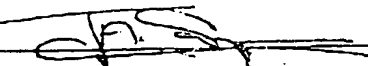
Date

Signature of Inventor

  
J.C. KNIGHT

Date 18 December 2001

Witnessed by

Date 18<sup>th</sup> December 2001

Signature of Inventor

B J MANGAN

Date

Witnessed by

Date

Signature of Inventor

Date

Witnessed by

Date

Signature of Inventor

Date

Witnessed by

Date

16-JAN-2002 09:58 FROM INTELLECTUAL PROPERTY

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IPD/P2828/USW

# ASSIGNMENT OF PATENT APPLICATION

(Inventors) ( Philip StJohn RUSSELL  
( Timothy Adam BIRKS  
( Jonathan Cave KNIGHT  
( Brian Joseph MANGAN  
(  
In consideration of past and future employment, and my (our) obligation to assign  
Intellectual property generated as result of my (our) employment, the receipt and  
sufficiency of which consideration is hereby acknowledged, the undersigned agree(s)  
to assign, and hereby does assign, transfer and set over to  
(Assignee)  
(Address) ( QINETIQ LIMITED  
(of QINETIQ LIMITED, Cody Technology Park, Ively Road, Farnborough, Hants GU14  
GLX United Kingdom  
(hereinafter designated as the Assignee) the undersigned's entire right, title and  
interest for the United States, its territories, dependencies and possessions, and for  
the country of  
(Other  
Countries) ( in the invention, and all application for patent and any Letters  
Patent which may be granted therefore, known as  
(Title) A Photonic Crystal Fibre and a Method for its Production (Case No.  
P2828/USW)  
for which the undersigned has (have) executed on even date herewith an application  
for patent in the United States of America or, if not on even date, then has executed  
(on \_\_\_\_\_ or has already filed in \_\_\_\_\_  
(U.S. appln. Serial No. 09/937715 filed on October 1, 2001  
(The undersigned acknowledges an obligation of assignment of this invention to said  
assignee at the time the invention was made.

The undersigned agree(s) to execute all papers and documents necessary in connection with the  
application or any interference which may be declared and any continuing or divisional applications thereof  
and also to execute separate assignments in connection with such applications as the Assignee may  
deem necessary or expedient and further to perform any act which may be necessary in connection with  
claims or provisions of the International Convention for Protection of Industrial Property or similar  
agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant  
of a valid United States patent to the Assignee.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any  
and all Letters Patent of the United States resulting from said application or any division or divisions or  
continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby  
covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has  
(they have) not executed and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the firm of NIXON & VANDERHUYE P.C. the power to insert on  
this assignment any further identification which may be necessary or desirable in order to comply with the  
rules of the United States Patent Office for recordation of this document.

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16-JAN-2002 09:58 FROM INTELLECTUAL PROPERTY

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In witness whereof, executed by the undersigned on the date(s) opposite the undersigned signature(s).

Signature of Inventor

P S RUSSELL

Date

Witnessed by

Date

Signature of Inventor

T A BIRKS

Date

Witnessed by

Date

Signature of Inventor

J C KNIGHT

Date

Witnessed by

Date

Signature of Inventor

B J MANGAN

Date

10/10/01

Witnessed by

CANN KENNY

Date

10/10/01

Signature of Inventor

Date

Witnessed by

Date

Signature of Inventor

Date

Witnessed by

Date